

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR JANUARY 1945

The Weather

Cooler than usual, particularly during the first week. Mild spell in the middle of the month.

The month opened with cool westerly winds following the exceptionally heavy rain of the last two days of December, and the temperature remained well below normal throughout the first week. At Helwan it did not rise above 14° C. (57° F.) for three days in succession, and reached only 13° C. on the 4th, being 6° C. below normal, while at Giza the temperature in the early mornings of the 3rd and 4th fell to 1° C. and ground frosts were recorded on these days. The cold weather was even more severe, relatively speaking, in Upper Egypt. At Qena the maximum temperature on the 4th was only 13° C. (55° F.) compared with a normal value of 23° C. (73° F.). Very low temperatures were experienced in the western desert; at Siwa Oasis the temperature fell to -4° C. (25° F.) on the morning of the 4th, equaling the lowest air temperature on record anywhere in Egypt except at high altitudes. At Dakhla Oasis -1° C. was registered on the 6th.

On the 7th a depression was situated over Italy and throughout the eastern Mediterranean and the greater part of Egypt southerly winds prevailed and the weather became milder. On the following day light showers occurred in Upper Egypt and the western desert. A further rise in temperature took place on the 11th during the approach of a depression along the eastern Mediterranean, but by the next day cool westerly winds arrived, with light rain near the coast.

A spell of unsettled weather began on the 14th and at Alexandria rain fell on eight days in succession. A deep depression was situated over Cyprus on the 16th when rain was general throughout Lower and Middle Egypt; mild but showery weather followed. The nights of 17th and 18th were exceptionally warm, the minimum temperatures recorded being in some places, especially in Upper Egypt, as much as 10° C. above the normal for the time of year. On the night of 17th/18th the temperature in Cairo did not fall below 16° C. (61° F.) compared with a normal of 8° C. Such a warm night in January has only once been recorded (in 1935) since observations began in 1909.

Heavy rain fell in many localities on the 18th, especially in coastal districts, the largest amounts being 21 millimetres at Borollos, 18 at Tolombat, 17 at El Arish and 12 at Rosetta. Conditions continued unsettled until the 21st, while on the 23rd winds of gale force prevailed over the eastern Mediterranean, the weather became much cooler and light showers occurred in northern Egypt.

After the 24th winds were mainly from the northeast and the temperature by day gradually rose, but the nights remained cooler than usual; dense morning mists were widespread on the 29th. The grass minimum temperature at Giza fell to -2° C. on the morning of the 30th. Egypt was under the influence of a depression near Cyprus on the 31st and strong southerly winds blew, reaching gale force in places, and causing extensive and severe duststorms. At Alexandria the velocity of the wind reached 80 kilometres per hour in the afternoon.

For the month as a whole the barometric pressure was everywhere well below normal. The mean temperature was also below normal, though not by large amounts. Rainfall was below normal in all districts; at Alexandria rain fell on twelve days but the total amount was only 28 millimetres, or little more than half the normal. Sunshine at Giza averaged 7.6 hours per day, being slightly in excess of the normal.

DEPARTURE FROM NORMAL FOR JANUARY 1945.

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m. b.	m. b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1017.4	—0.9	17.9	—0.4	9.3	—0.6	13.6	—0.5	24	— 9
II.—Lower Egypt ...	1018.0	—0.9	18.7	—1.1	6.3	—0.5	12.5	—0.8	9	— 3
III.—Middle Egypt ...	1018.4	—1.0	19.0	—0.3	7.6	—0.1	13.3	—0.2	drops	— 5
IV.—Upper Egypt ...	1018.5	—1.1	20.8	—0.5	7.1	0.0	14.0	—0.2	„	— 1
V.—Western Desert...	1019.4	—0.8	19.8	—1.4	4.3	—0.7	12.0	—1.0	„	0
VI.—Red Sea ...	1017.0	—1.0	21.7	0.0	11.6	+0.6	16.6	+0.3	„	— 1

L. J. SUTTON,
Director, Meteorological Service.

National Oceanic and Atmospheric Administration

Environmental Data Rescue Program

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State of the River

Lake Albert at Butiaba fell 15 cms. during the month. Its level on February 1st, 1945, was 74 cms. below the normal and 59 cms. below the corresponding day of last year.

The Bahr El Gabel at Juba fell 6 cms. during the month. The levels were much below the normal and those of last year.

The River Sobat ~~at Sobat~~ fell rapidly almost at a normal rate. The levels were on the average 44 cms. below the normal but 31 cms. above those of last year's throughout the month.

The White Nile at Malakal fell gradually at a normal rate. The levels were much below the normal but practically identical to those of last year throughout the whole month.

The Blue Nile at Roseires fell normally during the month. The levels, which were nearly similar to the normal during the whole month were on the average 23 cms. below those of last year. At Khartoum the River was nearly steady until the 13th, then fell rapidly at faster than normal rate until the end of the month. The levels were on the average 72 cms. below the normal and 6 cms. above last year.

At Kajnarty, on the Main Nile, the river fell at almost normal rate. The levels were on the average 126 cms. below the normal and 42 cms. below last year.

The difference of the mean levels in January 1945 from those of January 1944, and from the normal 1906-1935 were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	Jan. 1945 minus Jan. 1944	January 1945 minus Normal
	Metre	Metre
Butiaba *	— 0·59	— 0·74
Juba	— 0·48	— 0·70
Nasser †	+ 0·31	— 0·44
Malakal	+ 0·05	— 0·55
Roseires	— 0·23	+ 0·05
Khartoum	+ 0·06	— 0·72
Kajnarty	— 0·42	— 1·26

* For February 1st, 1945

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA.

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REPORT ON THE WEATHER AND STATE OF THE RIVER
FOR FEBRUARY 1945

The Weather

The coldest February since 1934. In Cairo district day temperatures were with exception well below normal continuously throughout the month. In the middle of the month the nights were slightly warmer than usual.

At the beginning of the month a depression was situated near Cyprus and the weather was cold and showery. Conditions throughout the eastern Mediterranean were very disturbed, with northwesterly winds of gale force and rough seas. At Alexandria the velocity of the wind reached 66 kilometres per hour in the early morning of the 1st. Conditions were much improved by the 3rd, but by the 6th there were again showers throughout Lower Egypt, and in some places rain fell every day until the 13th.

A depression passed along the coast of the Delta on the 8th, and during its approach southerly winds prevailed throughout Egypt; it passed in the evening, the winds veered to the west or northwest, the weather became much colder and heavy rain was widespread, showers occurring as far south as Minya. The largest amounts were 16 millimetres at Damanhur and 14 at Mersa Matruh on the 8th, and 28 at Tolombat, 18 at Mex and 15 at Alexandria on the 9th. Although the weather then gradually became less cold, the passage of another depression maintained unsettled conditions until the 14th; during this period 53 millimetres of rain were registered at Mex.

Fine weather then lasted for a week but day temperatures remained below normal. On the 21st a depression was situated off Salum resulting in southerly winds, and for the first time in the month the day temperature rose above normal. This depression passed in the evening and with the arrival of strong westerly winds a spell of unusually cold weather began and continued throughout the rest of the month. The wind reached gale force at Alexandria on the 22nd, 23rd and 24th and at Helwan on the 23rd and 24th, the highest velocity reached being 60 kilometres per hour. At many places near the coast rain fell daily for a week, but except on the 22nd and 23rd it was only moderate, and no rain fell south of Cairo. The largest amounts were 10 millimetres at Alexandria, Mex and Borolos on the 22nd and 15 at Damanhur on the 23rd.

The 23rd and 24th were particularly cold; at Alexandria and Helwan the temperature did not rise above 14°C (57° Fahr), or 7° C below normal, while in the early mornings it fell to 3°C (37° Fahr) at Giza, Helwan, Asyut and Siwa Oasis. At Giza the grass minimum thermometer registered 0.3° C below freezing point on the 24th and 27th.

For the month as a whole the barometric pressure was everywhere much above normal, and the temperature, especially by day, much below, the deficiency being most pronounced in Upper Egypt and the western desert. Rainfall was much above normal in Alexandria district and the western part of the Delta, and about normal elsewhere. The largest amounts recorded for the whole month were 74 millimetres at Mex (normal 26), 55 at Alexandria (normal 24) and 54 at Damanhur (normal 20). Rain fell on 15 days at Alexandria, the average number of rainy days in February being 7. Duration of sunshine at Giza averaged 7.5 hours per day compared with a normal of 8.2.

DEPARTURE FROM NORMAL FOR FEBRUARY 1945.

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1018.4	+1.6	17.8	—1.1	9.6	—0.9	13.7	—1.0	31	+ 7
II.—Lower Egypt ...	1019.2	+2.4	18.6	—2.0	6.6	—0.4	12.6	—1.2	17	+ 5
III.—Middle Egypt ...	1019.7	+2.1	19.1	—1.7	7.7	—0.7	13.4	—1.2	4	+ 1
IV.—Upper Egypt ...	1020.1	+2.3	20.8	—2.5	6.9	—1.1	13.8	—1.8	0	— 1
V.—Western Desert...	1021.2	+2.7	19.8	—3.6	5.5	—0.5	12.6	—2.0	1	0
VI.—Red Sea	1018.2	+1.9	20.0	—2.4	10.7	—0.6	15.4	—1.5	0	— 1

L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba fell 16 cms. during the month. Its level on March 1st., 1945, was 79 cms. below the normal and 55 cms. below the corresponding day of last year.

The Bahr El Jebel at Juba fell at normal rate during the whole month and the levels were much below both the normal and those of last year throughout.

The River Subat at Nasser fell at almost normal rate until the 17th. of the month, then rose sharply until the 22 nd., and fell again gradually thereafter. The levels were on the average almost identical with the normal and those of last year.

The White Nile at Malakal fell slower than normal rate, its levels were much below the normal and almost identical with those of last year throughout the month. At Gebel Aulia, regulation for emptying the Reservoir started on the 1st., the downstream levels rose sharply until the 8th. and kept almost steady thereafter.

The Blue Nile at Roseires fell almost at normal rate throughout the month. The levels were on the average almost identical with the normal but 18 cms. below those of last year. At Khartoum the river followed the same features which prevailed downstream Gebel Aulia.

At kajnarti on the Main Nile, the river fell rapidly until the 15th. of the month. A rapid and steady rise, due to the contribution from Gebel Aulia Reservoir, was maintained till the 25 th. The levels were in general 88 cms. below the normal but were almost identical with those of last year.

The differences of the mean levels in February 1945 from those of February 1944 and from the normal 1906—1935 were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	Febr. 1945 minus Febr. 1944	February 1945 minus Normal
	Metre	Metre
Butiaba *	— 0·55	— 0·79
Juba	— 0·47	— 0·74
Nasser †	+ 0·04	+ 0·01
Malakal	— 0·04	— 0·30
Roseires	— 0·18	+ 0·02
Khartoum	— 0·07	+ 0·17
Kajnarti	+ 0·02	— 0·88

* For March 1st, 1945

† Nasser normal is for 1922-35.

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REPORT ON THE WEATHER AND STATE OF THE RIVER FOR MARCH 1945

The Weather

Abnormally cold; in all districts the coldest March for at least thirty-five years. Thunderstorms on 24th and 25th.

The cold wave experienced during the last week of February continued into March, and on the morning of the 1st the grass minimum thermometer at Giza recorded 1°C below zero. On the 2nd northeasterly winds prevailed and the weather became milder; skies were overcast and light showers occurred throughout Delta. Winds veered to west on the 4th and the weather became much cooler, with further showers for a few days in the north of Egypt. The temperature in Cairo district on the 6th did not rise above 17°C (63°F) compared with a normal value of 23°C (73°F).

On the 8th Egypt came under the influence of a depression giving rise to mild southeasterly winds, but the break in the cold weather was of short duration, and by the 11th day temperatures fell to 5°C below normal and so continued with little variation for practically the rest of the month. On the 12th the depression, which was then situated over Cyprus, deepened and strong northwesterly winds and rough seas prevailed throughout the eastern Mediterranean, while the weather was cold and showery. On the 13th the temperature at Helwan did not exceed 16°C (61°F); such a cold day at this time of the year had not been registered since 1926. The cold air subsequently traversed the Nile valley as far as the southern Sudan.

An intense high-pressure system was then established, resulting in cold northerly and northeasterly winds. The night temperature in Cairo from 14th to 16th fell to 6°C (43°F) and ground frost was observed at Giza. The cold wave was very pronounced in the western desert; at Dakhla Oasis the highest temperature registered on these days was 21°C (70°F) compared with a normal of 29°C (84°F). Light showers occurred throughout Lower Egypt from 18th to 20th, with a thunderstorm at Port-Said.

Conditions were very disturbed from 24th to 26th. Rain was widespread in Lower Egypt and in places accompanied by thunderstorms and hail. On the 25th 16 millimetres of rain fell at Mex. 14 at Alexandria, 12 at Kafr el Sheikh, 11 at Mansoura; rainfall in Cairo during this period was 5 millimetres. The wind reached gale force at times, velocities of 62 kilometres per hour being recorded at Alexandria on the 25th and 68 kilometres at Helwan on the 26th. The weather was exceptionally cold, the maximum temperature in Cairo district and generally in the Delta on the 26th being only 17°C (63°F), or 8°C below normal.

Temperatures then rose rapidly, reaching the normal value on the 30th when a depression approached along the eastern Mediterranean, causing easterly winds and kham-sin conditions; strong southwesterly winds and dust storms prevailed on the following day.

For the month as a whole the barometric pressure was the highest ever recorded for March, the excess over the normal exceeding 5 millibars. The mean temperature was the lowest for March since 1910 on the Mediterranean coast, since 1907 in Cairo district, and at least since 1901 at Asyut. Rain fell at Alexandria on 15 days, but with the exception of that of the 25th the amounts were very small. Rainfall was about normal in the coast and above normal in the Delta. Sunshine at Giza averaged 8.5 hours per day compared with a normal of 8.9 hours.

DEPARTURE FROM NORMAL FOR MARCH 1945.

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1021.8	+5.9	18.5	-2.2	11.2	-1.1	14.8	-1.6	12	0
II.—Lower Egypt ...	1021.7	+5.4	20.2	-3.7	7.2	-1.8	13.7	-2.8	10	+ 4
III.—Middle Egypt ...	1021.9	+5.5	20.7	-3.6	7.9	-2.0	14.3	-2.8	3	- 1
IV.—Upper Egypt ...	1020.8	+4.9	24.0	-3.9	8.7	-2.3	16.4	-3.1	0	0
V.—Western Desert...	1022.3	+5.5	22.7	-4.9	8.4	-1.4	15.6	-3.2	0	0
VI.—Red Sea ...	1018.7	+4.1	22.0	-2.9	12.7	-1.4	17.4	-2.2	drops	- 1

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Director, Meteorological Service.

State of the River

Lake Albert at Butiaba fell 13 cms. during the month. Its level on April 1, 1945, was 83 cms. below the normal and 57 cms. below the corresponding day of last year.

The Bahr el Jebel at Juba fell a few cms. during the whole month. The levels were much below both the normal and those of last year throughout.

The River Sobat at Nasser fell at faster than normal rate until the end of the month. The levels were on the average 15 cms. below the normal and 8 cms. below those of last year.

The White Nile at Malakal fell at a normal rate, the levels in general were 26 cms. below the normal and 7 cms. below those of last year.

The Blue Nile at Roseires fell faster than normal rate during the whole month. The levels were in general below both the normal and those of last year throughout. At Khartoum the river fell steadily during the month. The levels were above the normal but were indential with those of last year throughout.

The Main Nile at Kajnarti fell a few cms. during the month. The levels were on the average 47 cms. above the normal but 15 cms. below those of last year.

The difference of the mean levels in March 1945 from those of March 1944 and from the normal (1906-1935) were :

STATION	MEAN DIFFERENCE OF LEVELS.	
	March 1945 minus February 1944	March 1945 minus Normal
	Metre	Metre
Butiaba *	- 0.57	- 0.83
Juba	- 0.50	- 0.82
Nasser †	- 0.08	- 0.15
Malakal	- 0.07	- 0.26
Roseires	- 0.20	- 0.08
Khartoum	- 0.01	+ 0.83
Kajnarti	- 0.15	+ 0.47

* For April 1st, 1945

† Nasser normal is for 1922-35 only.

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REPORT ON THE WEATHER AND STATE OF THE RIVER FOR APRIL 1945

The Weather

As throughout February and March, the weather continued abnormally cool, until near the end of April. An unusual feature was the almost complete absence of khamsin conditions.

At the beginning of the month a deep depression was centred over Cyprus, and strong cold northwesterly winds, reaching a velocity of sixty kilometres an hour at Alexandria and Helwan, prevailed over Lower Egypt, with light scattered showers. The wind moderated on the following day and subsequently, under the influence of rising pressure and north-easterly winds, the weather became steadily milder.

From the 7th to the 13th the temperature again fell steadily, cold air arriving from the northwest; light showers occurred in several localities on the 10th. On the 13th., the temperature in Cairo did not rise above 21° C. (70° Fahr), compared with a normal value of 28° C. (82° F).

Northeasterly winds then set in and the weather rapidly became milder. There was light rain on the coast on the 17th., and 18th., and a third cold spell began, lasting nearly a week; sand storms of moderate intensity occurred in a few places on the 21st.

On the 23rd., a deep depression was situated over the Balkans and southerly winds prevailed throughout the eastern Mediterranean and Lower Egypt, and by the 24th., the temperature rose appreciably above normal for the first time for nearly two months, reaching 35° C. (95° F.) in Cairo on the 25th. This minor heat wave was however of short duration, a rapid fall of temperature taking place in the evening on the arrival of north-westerly winds, and by the following day the weather was again unusually cool for the time of year.

A depression was centred off Benghazi on the 28th., and winds again became easterly and the weather warmer, with moderate khamsin conditions.

For the month as a whole the barometric pressure was everywhere abnormally high and the temperature low. Rainfall was below normal in all districts, being almost negligible in amount. Sunshine at Giza averaged 10.3 hours per day, about the normal amount.

DEPARTURE FROM NORMAL FOR APRIL 1945.

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1016.6	+2.4	22.0	—1.2	14.1	—0.5	18.0	—0.8	0	—4
II.—Lower Egypt ...	1016.7	+2.1	25.8	—2.0	10.4	—1.4	18.1	—1.7	0	—3
III.—Middle Egypt ...	1016.7	+2.4	27.0	—1.5	12.1	—1.3	19.6	—1.4	0	—2
IV.—Upper Egypt ...	1015.5	+2.0	30.9	—1.7	13.7	—1.5	22.3	—1.6	0	0
V.—Western Desert...	1017.0	+2.5	30.7	—1.7	12.8	—1.0	21.8	—1.4	0	0
VI.—Red Sea	1014.2	+1.8	26.6	—1.7	17.0	—0.8	21.8	—1.2	0	0

L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiatafell 12 centimeters during the month. Its level on May 1st, 1945, was 94 centimeters below the normal & 63 centimeters below the corresponding day of last year.

The Bahr el Jebel at Juba was almost steady for the first 22 days then fluctuated till the end of the month showing a slight tendency to rise. The levels which were exceptionally low were about 94 centimeters below the normal and 59 centimeters below last year's levels.

The River Sobat at Nasser continued to rise gradually until the 7th., then fluctuated about an almost steady level till the end of the month. The levels were on the average 45 centimeters below the normal and 39 centimeters below those of last year.

The levels of the White Nile at Malakal were also exceptionally low throughout the month on the average; they were 49 centimeters below the normal and 46 centimeters below those of last year. At Gebel Aulia regulation for emptying the Reservoir ended on the 21st., of the month when all sluices of the dam were fully open. The D.S. levels which were almost steady until that date, fell rapidly thereafter.

The Blue Nile at Roseires fluctuated slightly throughout the month. The levels were generally 10 centimeters below the normal and 22 centimeters below those of last year. At Khartoum, the River repeated the same features recorded D.S. Gebel Aulia.

At Kajñarti, on the Main Nil the levels fell slightly throughout the month; on the average they were 54 centimeters above the normal but 24 centimeters below those of last year.

The difference of the mean levels in April 1945 from those of April 1944 and from the normal 1906-1935 were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	APRIL 1945 minus APRIL 1944	APRIL 1945 minus Normal
	Metre	Metre
Butiaba *	— 0·63	— 0·94
Juba	— 0·59	— 0·94
Nasser †	— 0·39	— 0·45
Malakal	— 0·49	— 0·46
Roseires	— 0·22	— 0·10
Khartoum	— 0·24	— 0·05
Kajñarti	— 0·27	+ 0·54

* For May 1st, 1945

† Nasser normal is for 1922-35 only.

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REPORT ON THE WEATHER AND STATE OF THE RIVER FOR MAY 1945

The Weather

The outstanding feature of the weather during May was the prevalence of severe thunderstorms during the second week.

They occurred throughout the country over a period of nearly a week ; such a long period of thunderstorms in May has never previously been recorded.

In many localities rainstorms were of exceptional violence and were accompanied by hail. They also resulted in serious floods and caused considerable damage to buildings, communications and plantations.

At the beginning of the month the weather was cool with fresh northerly winds, but dry northeasterly winds succeeded and temperatures rose.

On the 7th, Sham el Nessim, a depression over the Western Desert brought much warmer weather, the temperature in Cairo rising to 40°C (104 °F) or 8 °C above the normal ; northeasterly winds were very strong reaching a velocity of 75 K.P.H. at Helwan and much dust was carried in the air. On the evening of the following day thunderstorms occurred in Upper Egypt from Asyut to Aswan ; and there ensued throughout Egypt a long period of exceptionally unsettled weather.

In the early morning of the 9th a wind velocity of 82 K.P.H. from the northeast was registered at Helwan ; and thunderstorms occurred in Cairo district. During the afternoon the temperature rose to 42 °C (108 °F) near Cairo and to 45 °C (113 °F) at Luxor ; and further thunderstorms with heavy rain took place in many localities during the night. A gust of 87 K.P.H. was recorded at Helwan at midnight. Thunderstorms were widespread on the 11th ; the largest amounts measured being 23 mms. of rain registered at Siwa Oasis, and 17 mms. at Helwan..

The night temperatures were abnormally high during the whole of the 2nd week. The minimum temperature in Cairo was frequently 6 or 7 °C above normal.

Thunderstorms and heavy rain occurred until the 15th from the Mediterranean coast to the Northern Sudan; and from the Western Desert to the northern Red Sea. In many districts the rain was accompanied by large hailstones (it was said more than 2 inches in diameter) ; among the highest amounts recorded in a single day were 39 mms. at Gebel el Asfar on the 14th, 35 mms. at Damanhur and Mansurah on the 13th, 29 at Ismailia on the 13th, 28 and 25 at Helwan on the 13th and 14th, 25 and 31 mms. at El-Arish on the 12th and 13th respectively. These rainstorms were at times associated with severe gales. The wind attained a velocity of 101 K.P.H. at Helwan on the 13th.

The intensity of the rainstorms varied greatly within short distances, thus while only 10 mms. of rain fell in Cairo during the whole period, Helwan received 72 mms. The Nile was discoloured for over a week by the large quantities of fine mud carried into it by way of the Wadis south of Cairo. It is estimated that 44 million cubic metres of rain water entered the river between Aswan and the Delta Barrage during these storms. Even on the coast the variation in the intensity of the rainstorms was very noticeable, thus Alexandria and Rosetta received only 5 mms., and less than 1 mm. respectively during the whole period of the disturbances, while at Port Said and El-Arish 24 and 70 mms. were collected.

The following table shows the amounts registered at selected stations, together with the previous record totals for May.

RAINFALL IN MAY

STATION	1945	Previous highest	
	mms.	mms.	year
Alexandria	5	12	1936
Port Said	24	33	1944
Mansurah	41	16	1934
Kafr El Shiek	34	21	1943
Damanhur	42	16	1906
Tanta	38	16	1913
Cairo	10	28	1923
Suez	19	7	1929
Helwan	72	14	1944
Fayum	35	1	1944
Siwa Oasis	40	3	1931
Ismailia	42	41	1906
El Arish	70	12	1934

Helwan observatory received 72 mms. in May alone. If we add to this the amounts received during the rainy season of 1944/45 i.e. from October 1944 to September 1945, the figure will rise to 125 mms. by now which is the highest on record for any year since the observatory was established in 1903.

* * *

A period of settled weather then prevailed from the 16th to the 25th.

On the following day a shallow desert depression traversed Upper Egypt causing hot strong northeast winds to prevail over Middle Egypt. The thermometer in Cairo rose to 39 °C (102 °F), being 5 °C above normal on two successive days namely the 27th and 28th, and minor light thunderstorm took place in some localities. After the passage of the depression cool weather prevailed until the end of the month.

For the month as a whole the mean atmospheric pressure was below normal everywhere, while the temperature was above normal in all districts (it may be of interest to note that the monthly mean temperatures for the previous months—January 1945 to April 1945—were continuously below normal. This is the first month during this year in which the temperature exceeded the normal).

Rainfall was in excess throughout Egypt.

DEPARTURE FROM NORMAL FOR MAY 1945.

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1012.8	—0.6	25.9	+0.1	18.6	+1.1	22.2	+0.6	16	+14
II.—Lower Egypt ...	1012.2	—1.5	32.4	+1.0	16.5	+1.3	24.4	+1.2	17	+15
III.—Middle Egypt ...	1011.7	—1.3	34.1	+1.6	18.3	+1.3	26.2	+1.4	26	+24
IV.—Upper Egypt ...	1010.3	—1.5	37.2	+1.0	20.7	+1.3	29.0	+1.2	10	+9
V.—Western Desert...	1011.8	—1.0	35.8	—0.8	20.5	+2.1	28.2	+0.6	13	+13
VI.—Red Sea	1009.2	—1.6	31.7	+0.3	21.2	+1.1	26.4	+0.7	4	+4

MAHMUD HAMED MOHAMMED,

Acting

Director Meteorological Service.

State of the River

Lake Albert at Butiaba rose 10 cms. during the month. Its level on June 1, 1945 was 89 cms. below the normal and 59 cms. below the corresponding day of last year.

The Bahr el Jebel at Juba showed some flushes, the highest was on the 26th when its level was 39 cms. above the normal. The levels were on the average 77 cms. below the normal and 52 cms below those of last year.

The River Sobat at Nasser fell slightly until the 6th when the level was 97 cms. below the normal. It then rose sharply till the end of the month when it was 49 cms. above the normal. The levels were on the average 16 cms. below the normal and 77 cms. below those of last year.

The White Nile at Malakal, also fell slightly during the first ten days then started its annual rise faster than normal rate. The level which was 76 cms. below the normal on the 10th of the month was nearly similar to it at its end. The levels were on the average 50 cms. below the normal and 72 cms. below last year's.

The Blue Nile at Roseires was practically steady until the 12th when an abnormal and steady rise set in. The level reached its maximum on the 26th when it was 2.15 ms. above the normal, but it fell again to the normal by the end of the month. The red water was reported to have passed Roseires on the 18th. The levels were on the average 32 cms. above the normal but 23 cms. below last year's.

At Khartoum the River was almost steady till the 23rd of the month then began to rise until the end of the month. The levels were in general 51 cms. below the normal and 39 cms. below those of last year.

Records of Khashm el Girba gauge started on the 10th of May and showed a tendency of a rise in levels which reached 12.15 ms. on the 18th, the highest recorded for the month of May since 1914. The level dropped afterwards till the end of the month when it was 40 cms. below the normal.

At Kajnarti on the Main Nile, the River fell rapidly till the end of the month. The levels were in general 48 cms. below the normal and 45 cms. below those of last year.

The difference of the mean levels in May 1945 from those of May 1944 and from the normal (1906-1935) were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	MAY 1945 minus MAY 1944	MAY 1945 minus Normal
	Metre	Metre
Butiaba *	— 0.59	— 0.89
Juba	— 0.52	— 0.77
Nasser †	— 0.77	— 0.16
Malakal	— 0.72	— 0.50
Roseires	— 0.23	+ 0.32
Khartoum	— 0.39	— 0.51
Kajnarti	— 0.45	— 0.48

* For June 1st, 1945.

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA,
Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR JUNE 1945

The Weather

A relatively cool spell for nearly two weeks commencing the 5th; otherwise small departures from average conditions.

The pressure distribution was generally of the settled summer type throughout the month.

During the 2nd and 3rd the weather was somewhat warmer than usual. On the 5th a cool spell began and lasted until the 18th with temperatures by day 3 or 4 °C. below normal in some places, and there was a moderate amount of low cloud. The temperature in Cairo on the 10th did not rise above 31 °C. (88 °F.) or 4 °C. below normal. Strong northerly winds reaching a velocity of 66 K.P.H. were experienced at Helwan on the 15th.

Average conditions were established on the 19th and lasted until the end of the month.

For the month as a whole the mean atmospheric pressure was slightly above normal everywhere except in Lower Egypt and the Red Sea coast, while the temperature was below normal in all districts except the Mediterranean coast.

DEPARTURE FROM NORMAL FOR JUNE 1945

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1012.3	+0.1	27.9	—0.1	20.9	+0.5	24.4	+0.2	0.0	0.0
II.—Lower Egypt ...	1011.9	—0.1	32.7	—1.1	17.7	—0.4	25.2	—0.8	0.0	0.0
III.—Middle Egypt ...	1012.0	+0.4	34.0	—1.0	19.3	—0.3	26.6	—0.6	0.0	0.0
IV.—Upper Egypt ...	1010.7	+0.6	36.7	—1.7	20.9	—1.1	28.8	—1.4	0.0	0.0
V.—Western Desert...	1013.0	+1.4	36.6	—2.2	21.7	+0.2	29.2	—1.0	0.0	0.0
VI.—Red Sea ...	1007.9	—0.5	32.0	—1.4	22.6	—0.6	27.3	—1.0	0.0	0.0

RAINFALL IN (M/MS) FOR JUNE 1945

Station	1945	Diff. From Normal
J. ba	116	— 17
Wau	38	—123
M. ak. al	19	—104
El-Obeid	51	+ 15
El-Fasher	1	— 14
Khartoum	0	— 9
A. leis Ab. b.*	—	—
Roseires	49	— 80
Wad Medani	15	— 17
Aibara	0	— 2
Kassala	1	— 27
Port Sudan	0	0

* Not yet received

M. HAMED MOHAMMAD,
Acting Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose 1 c.n. during the month. Its level on July 1st, 1945, was 91 cms. below the normal and 48 cms. below the corresponding day of last year.

The Bahr el Jebel at Juba remained steady until the 8th, then fluctuated with a tendency to rise till the end of the month. The levels, in general, were 65 cms. below the normal and 15 cms. below those of last year's.

The River Sobat at Nasser fell until the 5th., then rose afterwards until the end of the month. The levels were in general 7 cms. below the normal and 56 cms. below those of last year throughout the month.

The White Nile at Malakal rose steadily at almost normal rate during the whole month. The levels were, in general, 14 cms. below the normal and 42 cms. below those of last year throughout the month.

The sharp fluctuations of the Blue Nile at Roseires were the remarkable features of the month. Series of peak were recorded, the highest being on the 13th when the level was 1.36 metres above the normal. The levels were on the average 13 cms. above the normal but 18 cms. below those of last year's. At Khartoum the river recorded the general features of the Blue Nile at Roseires. The levels were 14 cms. below the normal but almost identical with those of last year.

The River Atbara at Khasbm el Griba rose sharply after the 7th recorded a peak on the 9th when the level was 1.71 metres above the normal, then fell gradually with some fluctuations until the end of the month.

The Main Nile at Kajarti fell for the first three days, then rose sharply until the 17th. It fell again till the 27th and rose afterwards till the end of the month. The levels were on the average 10 cms. below the normal and 20 cms. below those of last year throughout the month.

The difference of the mean levels in June 1945 from those of June 1944 and from the normal 1906-1935 were : —

STATION	MEAN DIFFERENCE OF LEVELS	
	JUNE 1945 minus JUNE 1944	JUNE 1945 minus Normal
	Metre	Metre
Butiaba *	— 0.48	— 0.91
Juba	— 0.15	— 0.65
Nasser †	— 0.56	— 0.07
Malakal	— 0.42	— 0.14
Roseires	— 0.18	+ 0.13
Khartoum	— 0.02	— 0.14
Kajarti	— 0.02	— 0.10

* For July 1st, 1945.

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA,

Director, Hydrological Service.

Ministry of Public Works, Egypt. —Physical Department

* REPORT ON THE WEATHER AND STATE OF THE RIVER FOR JULY 1945

The Weather

Weather conditions were generally of the usual settled type with small departures from the normal except on the 10th.

From the 5th to the 8th the weather was slightly cooler than usual.

On the 9th a shallow unusual depression appeared over the Sahara South of Siwa and gave rise to strong warm northeast winds in Middle Egypt. A Gust of 61 K.P.H. was registered at Helwan.

On the following day the depression was traversing Upper Egypt, the weather became much warmer. In the afternoon the thermometer rose to 43° C. (109° F.) in Helwan, being 8° C. above normal; the same figure was reached in the screen of the Physical Department. The previous record of July highest maximum temperature in Cairo (Ezbekieh) was 42.6° C. in 1940.

In Upper Egypt the temperatures were much higher reaching 47° C. (117° F.) in Qena and Luxor.

The depression passed to the east during the night, and by the morning of the 11th northwesterly winds traversed Egypt causing a pronounced fall in temperature.

For the rest of the month the temperature was practically normal with modifications of 1 or 2° C.

For the month as a whole the mean atmospheric pressure was below normal everywhere, while the temperature was above normal in all districts except on the Red Sea Coast.

DEPARTURE FROM NORMAL FOR JULY 1945

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN) ÷ 2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	m.m.
I.—Mediterranean ...	1008.3	—0.9	29.9	+0.5	22.8	+0.4	26.4	+0.4	0.0	0.0
II.—Lower Egypt ...	1007.9	—1.2	34.5	+0.1	29.3	+0.6	27.4	+0.4	0.0	0.0
III.—Middle Egypt ...	1008.0	—1.0	36.5	+0.8	21.7	+0.5	29.1	+0.6	0.0	0.0
IV.—Upper Egypt ...	1006.6	—1.4	39.1	+0.6	23.2	+0.1	31.2	+0.4	0.0	0.0
V.—Western Desert...	1009.0	—0.6	38.7	—0.3	23.2	+1.0	31.0	+0.4	0.0	0.0
VI.—Red Sea ...	1004.2	—1.8	34.3	+0.1	25.0	0.0	29.6	0.0	0.0	0.0

RAINFALL DATA FOR JULY 1945

Station	1945	Diff. From Normal
	mm.	mm.
Juba ...	297	+162
Wau ...	278	+ 85
Malakal ...	168	— 1
El-Obeid ...	172	+ 71
El-Fasher ...	112	+ 8
Khartoum ...	4	— 50
Addis Ababa*	275	+ 1
Roseires ...	111	— 71
Wad Medani ...	44	— 91
Atbara ...	0	— 18
Kassala ...	43	— 47
Port Sudan ...	Drops	— 7

* Readings not received.

M. HAMED MOHAMMAD,
Acting Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose 8 cms. during the month. Its level on August 1st, 1945, was 85 cms. below the normal and 37 cms. below the corresponding day of last year.

The Bahr el Jebel at Juba fluctuated throughout the month. The levels were on the average well below the normal but almost identical to those of last year's.

The River Sobat at Nasser rose gradually at normal rate throughout the month. The levels were in general below both the normal and those of last year.

The White Nile at Malakal continued its rise at almost normal rate during the whole month. The levels were below both the normal and those of last year throughout. At Gebel Aulia regulation for filling the Reservoir started on the 24th, the D.S. levels, effected by the sharp rise of the Blue Nile, continued to rise until the 26th, then fell slightly until the 28th, but rose sharply thereafter.

At Roseires on the Blue Nile, several flushes gradually increasing in height, were recorded during the month, the highest was that of the 29th when the level was 1.80 m. above the normal. The levels were as a whole identical to the normal but 40 cms. below those of last year's. At Khartoum the sharp fluctuations which occurred at Roseires were slightly stunted by the filling of Sennar Reservoir as well as by the effect of the White Nile. The levels were on the average 72 cms. below the normal and 45 cms. below last year's.

Violent fluctuations were recorded on the River Atbara at Khashm el Girba, the highest was that of the 28th, when the level was 42 cms. above the normal. The levels were in general 15 cms. below the normal but 12 cms. above those of last year's throughout.

The Main Nile at Kajnarti rose slightly until the 20th, then rapidly at almost normal rate till the end of the month. The levels on the average were 75 cms. below the normal and 68 cms. below those of last year's throughout.

The difference of the mean levels in July 1945 from those of July 1944 and from the normal 1906-1935 were :

STATION	MEAN DIFFERENCE OF LEVELS	
	JULY 1945 minus JULY 1944	JULY 1945 minus Normal
	Metre	Metre
Butiaba *	— 0.37	— 0.85
Juba	— 0.12	— 0.52
Nasser †	— 0.14	— 0.11
Malakal	— 0.35	— 0.20
Roseires	— 0.40	+ 0.00
Khartoum	— 0.45	— 0.72
Khashm el Girba	+ 0.12	— 0.15
Kajnarti	— 0.68	— 0.75

* For the first day of the month.

† Nasser normal is for 1922-35 only.

M. GHABRIAL,

Acting Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER
FOR AUGUST 1945

The Weather

Abnormally warm. Warmest August in Cairo district for at least 45 years.

At the beginning of the month warm dry northeast winds prevailed over Middle Egypt. The temperature reached 40° C (104° F) in Cairo and Helwan, being 5° C above normal. 43° C (109° F) was registered at Suez on the 3rd, which is a record for August. In Upper Egypt 48° C (118° F) was reached at Luxor on 3 successive days commencing the 2nd.

On the 4th pressure over Egypt had risen and winds became north-westerly, temperature dropped and rather cool weather was enjoyed for few days.

Another hot spell of moderate intensity developed at the end of the 2nd week and lasted until the 16th, the temperature in Cairo again reaching 40° C.

The heat wave weakened somewhat from the 17th to the 20th. On the 21st a distant depression in the north gave rise to warmer weather. A maximum temperature of 41° C (106° F) was recorded on the 23rd at Helwan, being 7° C above normal. Upper Egypt and the Western Desert both suffered from this hot weather. 44° C (111° F) was encountered with at Siwa Oasis, being 7° C above normal.

The cool front of this depression crossed northern Egypt on the 24th, and an appreciable fall in temperature followed.

On the 27th a shallow depression appeared over the eastern Mediterranean. Winds went round to the southeast and the weather became much hotter. The temperature in Cairo district for the 4th time during the month reached 40° C, i.e. 6° C above normal. The passage of the depression in the evening was marked by a considerable fall in temperature, and the heat wave then gradually weakened until the end of the month.

For the month as a whole the atmospheric pressure was below normal in all districts, while the temperature was above normal everywhere. The mean maximum temperature in Cairo was 36.9° C, compared with a normal of 35° C. This is half a degree higher than the previous highest maximum recorded since 1901.

The minimum temperature in Cairo was continuously above normal practically throughout the month save 3 nights in which it fell slightly below normal.

On two successive nights commencing the 4th the mercury of the thermometer remained above 33° C (91° F) during the whole night in Aswan, being 7° C above normal, i.e. the lowest night temperature at Aswan on both nights was similar to the midday temperature in most places in the Delta.

In Cairo humidity was much below normal, the mean relative humidity for the month was 54 per cent compared with a normal of 61 per cent.

DEPARTURE FROM NORMAL FOR AUGUST 1945

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1009.0	—0.8	31.6	+1.4	24.1	+1.0	27.8	+1.2	0.0	0.0
II.—Lower Egypt ...	1008.8	—1.0	35.9	+1.5	20.9	+0.8	28.4	+1.2	* Drops	0.0
III.—Middle Egypt ...	1008.6	—1.0	37.5	+2.4	22.4	+1.4	30.0	+1.9	0.0	0.0
IV.—Upper Egypt ...	1007.3	—1.2	40.2	+2.1	23.9	+0.7	32.0	+1.4	0.0	0.0
V.—Western Desert...	1009.3	—0.9	40.3	+1.4	24.0	+2.2	32.2	+1.8	0.0	0.0
VI.—Red Sea ...	1005.5	—1.0	35.3	+0.7	25.6	0.0	30.4	+0.4	0.0	0.0

* Drops in Mansura only.

RAINFALL DATA FOR AUGUST 1945

Station	1945	Diff. From Normal
	mm.	mm.
Juba	108	— 20
Wau	83	— 123
Malakal	180	— 2
El-Obeid	130	+ 9
El-Fasher	135	+ 4
Khartoum	48	— 23
Addis Ababa*	282	— 4
Roseires	99	— 115
Wad Medani	95	— 44
Atbara	44	+ 7
Kassala	50	— 71
Port Sudan	4	+ 1

* Not yet received.

M. HAMED MOHAMMED,
Acting Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose 24 cms. during the month. Its level on September 1, 1945 was 20 cms. below the normal and 68 cms. below the corresponding day of last year.

The Bahr el Jebel at Juba fell until the 5th then rose sharply to the normal and fluctuated about it between the 9th and the 24th. It then fell steadily until the end of the month. On the average, the levels were 35 cms. below the normal but 24 cms. above those of last year throughout the month.

The River Sobat at Nasser continued its rise until the end of the month. The levels in general were 8 cms. above the normal and 24 cms. above those of last year's throughout the month.

The White Nile at Malakal rose steadily at a normal rate during the month. The levels were in general 19 cms. below the normal and 20 cms. below those of last year.

The Blue Nile at Roseires fluctuated sharply during the whole month, the highest peak recorded was that of the 15th when the level was 89 cms. above the normal. The levels were on the average 42 cms. below the normal and 34 cms. below those of last year. At Khartoum the general features at Roseires were reflected some days later.

The River Atbara at Khashm el Girba also showed some sharp fluctuations, the highest peak was recorded on the 14th when the level was 46 cms. above the normal. As a whole the levels were 24 cms. below the normal but 29 cms. above those of last year throughout the month.

The Main Nile at Kajnarti rose rapidly until the 10th, then fell until the 15th and rose afterwards rapidly reaching a peak on the 23rd when the level was 27 cms. above the normal. The levels were in general 55 cms. below the normal and 53 cms. below those of last year throughout the month.

The difference of the mean levels in August 1945 from those of August 1944 and from the normal 1906-1935 were:—

STATION	MEAN DIFFERENCE OF LEVELS	
	AUGUST 1945 minus AUGUST 1944	AUGUST 1945 minus Normal
	Metre	Metre
Butiaba*	— 0·20	— 0·68
Juba	+ 0·24	— 0·35
Nasser †	+ 0·24	— 0·08
Malakal	— 0·20	— 0·19
Roseires	— 0·36	— 0·42
Khartoum	— 0·25	— 0·64
Khashm el Girba	+ 0·29	— 0·24
Kajnarti	— 0·52	— 0·54

* For September 1st 1945.

† Nasser normal is for 1922-35 only.

M. GHABRIAL,
Acting Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR SEPTEMBER 1945

The Weather

Normal summer conditions prevailed practically throughout the month.

For the first ten days of the month the weather was warmer than usual, while during the 2nd half it was somewhat cool.

Earthquake occurred in Cairo on the 2nd at 13^h 55^m 15^s.

On the morning of the 9th a shallow depression was situated off Matruh which gave rise to warm weather, a maximum temperature of 37°C was recorded in Cairo *i.e.* 4°C above normal. The cool front of this depression crossed northern Egypt during the night.

From the 15th to the end of the 3rd week northwesterly winds and rather cool weather prevailed. Settled conditions continued until the end of the month.

For the month as a whole the mean atmospheric pressure was below normal everywhere except the Mediterranean coast and the Western Desert, while the temperature was generally above normal. The air in Cairo district was much drier than usual. The mean relative humidity was 60% below the average.

DEPARTURE FROM NORMAL FOR SEPTEMBER 1945

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1013.2	+0.4	30.4	+1.0	22.6	+0.5	26.5	+0.8	0.0	0.0
II.—Lower Egypt ...	1013.2	—0.1	32.3	—0.3	19.0	+0.5	25.6	+0.1	0.0	0.0
III.—Middle Egypt ...	1013.1	—0.1	32.6	+0.4	20.0	+0.9	26.3	+0.6	0.0	0.0
IV.—Upper Egypt ...	1011.4	—0.1	36.2	+0.8	21.3	+0.1	28.8	+0.4	0.0	0.0
V.—Western Desert...	1013.7	+0.4	35.4	—0.8	21.0	+1.1	28.2	+0.2	0.0	0.0
VI.—Red Sea(Egypt)...	1008.8	—0.6	33.5	+1.0	24.5	+0.7	29.0	+0.8	0.0	0.0

RAINFALL DATA FOR SEPTEMBER 1945

Station	1945	Diff. From Normal
	mm.	mm.
Juba	120	+ 12
Wau	154	— 17
Malakal	186	+ 52
El-Obeid	75	+ 1
El-Fasher	74	+ 42
Khartoum	42	+ 23
Addis Ababa*	243	+ 53
Roseires	122	— 27
Wad Medani	64	+ 7
Atbara	19	+ 13
Kassala	24	— 32
Port Sudan	0	0

M. HAMED MOHAMMED,
Acting Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose 14 cms. during the month. Its level on October 1st 1945, was 62 cms. below the normal and 12 cms. below the corresponding day of last year.

The Bahr el Jebel at Juba fluctuated throughout the whole month. On the average the levels were 40 cms. below the normal but 21 cms. above those of last year.

The River Sobat at Nasser rose somewhat faster than normal rate. Its levels were generally 30 cms. above the normal and 57 cms. above those of last year throughout the month.

The White Nile at Malakal also rose faster than the normal. On the average, its levels were 12 cms. below the normal and 8 cms. below those of last year's.

The Blue Nile at Roseires fluctuated sharply throughout the whole month. The highest peak of the year was that of the 9th, when the level was 1.13 metres above the normal. In general the levels were 73 cms. above the normal and 1.32 metres above those of last year. The same features were reflected downstream at Khartoum where the levels were, on the average, 34 cms. below the normal but 60 cms. above those of last year.

The River Atbara at Khashm el Girba, showed a tendency to fall with some fluctuations throughout the month. The levels were on the average 33 cms. above the normal and 1.24 metres above those of last year's.

The Main Nile at Kajnarti fluctuated with a steady rise until the 25th then fell rapidly until the end of the month. The levels were on the average 39 cms. below the normal but 69 cms. above those of last year.

The difference of the mean levels in September 1945 from those of September 1944 and from the normal 1906-1935 were :

STATION	MEAN DIFFERENCE OF LEVELS	
	SEPTEMBER 1945 minus SEPT. 1944	SEPTEMBER 1945 minus Normal
	Metre	Metre
Butiaba †	— 0·09	— 0·62
Juba	+ 0·21	— 0·40
Nasser *	+ 0·57	+ 0·30
Malakal	— 0·08	— 0·12
Roseires	+ 1·32	+ 0·73
Khartoum	+ 0·60	— 0·34
Khashm el Girba	+ 1·24	+ 0·33
Kajnarti	+ 0·69	— 0·39

† For October 1st 1945.

* Nasser normal is for 1922-35 only.

Y. M. SIMAIKA.

Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR OCTOBER 1945

The Weather

A moderate heat wave in the first week ; mainly cooler than usual for the rest of the month.

Northwesterly winds and fairly cool weather prevailed at the beginning of the month, with light showers in coastal districts. A shallow depression situated over the Aegean on the 4th gave rise to northeasterly winds and warmer weather in Egypt. Temperatures rose considerably on the 7th when winds blew from between northeast and southeast, reaching moderate gale force at times. In Cairo the temperature rose to 39°C (102°F), or 8 °C above the normal for the time of year, while on the following day 40° C was recorded at Asyut, a record for October since 1905 at least, and 43°C (109°F) at Aswan.

Cool air from the northwest reached Egypt on the 9th and by the next day temperatures were well below normal, and very light showers occurred in a few coastal places. With little exception cool, settled weather then prevailed throughout the month, except towards the end when conditions again became disturbed and there were few light scattered showers. A thunderstorm took place at Qosseir on the Red Sea during the night of 28/29, and rainfall amounted to 11 mms.

For the month as a whole the barometric pressure was everywhere well above normal and temperature below. Except at Qosseir rainfall was below normal, being almost negligible at inland places. Relative humidity at Alexandria and Cairo was appreciably below normal.

DEPARTURE FROM NORMAL FOR OCTOBER 1945

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1018.1	+2.3	27.5	—0.4	19.6	—0.3	23.6	—0.4	3	—4
II.—Lower Egypt ...	1018.2	+2.0	28.5	—2.0	15.8	—0.6	22.2	—1.3	0	—4
III.—Middle Egypt ...	1018.1	+1.9	29.0	—1.1	16.3	—0.8	22.6	—1.0	0	—2
IV.—Upper Egypt ...	1016.3	+1.8	31.7	—0.9	17.6	—1.0	24.6	—1.0	0	—1
V.—Western Desert...	1018.0	+2.1	31.5	—1.8	17.0	+0.3	24.2	—0.8	0	0
VI.—Red Sea ...	1014.1	+0.8	30.1	—0.1	20.3	—0.1	25.2	—0.1	4	+3

L. J. SUTTON,

Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose 7 centimetres during the month. Its level on November 1, 1945 was 62 centimetres below the normal and 3 centimetres below the corresponding day of last year.

With the exception of three sudden fluctuations, the Bahr el Jebel at Juba fell rapidly till the 18th and was almost steady afterwards. The levels were on the average 51 cms. below the normal but 10 cms. above those of last year throughout the whole month.

The River Sobat at Nasser rose a few cms. during the whole month. The levels were in general 31 cms. above the normal and 51 cms. above those of last year's.

The White Nile at Malakal rose at almost normal rate. The levels were on the average 4 cms. above the normal and 10 cms. above those of last year's.

After a small rise which was maintained until the 3rd of the month, the Blue Nile at Roseires fell very rapidly until the 10th then at a slower than normal rate till the end of the month. The levels were in general 91 cms. above the normal and 1.65 ms. above those of last year's.

At Khartoum the river repeated the same features recorded at Roseires and the levels were on the average 9 cms. above the normal and 1.32 ms. above those of last year's.

The River Atbara at Khashm el Girba fell rapidly till the 20th then rose slightly on the 21st and fell again slightly till the end of the month. The levels, on the average, were 14 cms. above the normal and 1.04 ms. above those of last year's.

The Main Nile at Kajnarti rose slightly during the first ten days then fell rapidly thereafter. The levels were in general 29 cms. above the normal and 1.66 ms. above those of last year.

The difference of the mean levels in October 1945 from those of October 1944 and from the normal 1906-1935 were :

STATION	MEAN DIFFERENCE OF LEVELS	
	OCTOBER 1945 minus OCT. 1944	OCTOBER 1945 minus Normal
	Metre	Metre
Butiaba†	— 0·03	— 0·62
Juba	+ 0·10	— 0·51
Nasser *	+ 0·51	+ 0·31
Malakal	+ 0·10	+ 0·04
Roseires	+ 1·65	+ 0·91
Khartoum	+ 1·32	+ 0·09
Khashm el Girba	+ 1·04	+ 0·14
Kajnarti	+ 1·66	+ 0·29

† For October 1st 1945.

* Nasser normal is for 1922-35 only.

Y. M. SIMAIKA.
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REPORT OF THE WEATHER AND STATE OF THE RIVER FOR NOVEMBER 1945

The Weather

The chief features were : mild weather from 9th to 15th, a rainy spell from 16th to 19th, and very heavy rainstorms on 29th and 30th.

During the first week the weather was generally settled and pleasant. On 10th a small depression appeared off the coast of Cyrenaica causing dry easterly winds and warm weather in Egypt. On the following day the winds became southerly and the weather much warmer, the temperature in Cairo rising to 32° C. (90° F.), or 6° C. above normal. With the passage of the depression the winds veered to the west and the weather became cooler, but by the 13th very dry easterly winds prevailed and the temperature in Cairo on 14th reached 33° C. while the relative humidity in the middle of the day fell to 13 per cent. The depression passed north of the Delta on 16th and with the arrival of westerly winds a sharp fall in temperature accompanied by rainy weather occurred. Near the coast the rain was very heavy, and showers took place as far south as Fayoum. The weather was particularly cold on 17th when strong southwesterly winds, reaching a velocity of 54 kilometres per hour at Alexandria, traversed Egypt. At Giza and Helwan the temperature did not rise above 20° C. (68° F.) compared with 31° C. (88° F.) three days previously. Rainfall registered during this spell amounted to 52 millimetres at Borollos, 27 at Mariut, 22 at Alexandria and 13 at Giza.

Unsettled conditions lasted for four days, but with a rise in the barometer a period of mild weather followed, during which north-east winds predominated, reaching a velocity of 50 kilometres per hour at Helwan.

Showers occurred in a few scattered localities from 24th to 26th but were nowhere heavy.

On 27th a depression appeared off Cyrenaica, resulting in southerly winds in Egypt; the wind was at times very strong causing widespread sandstorms of moderate intensity. The wind veered to south-west on 29th and the weather became cooler and very disturbed. Very heavy rain fell near the coast and showers occurred throughout Lower Egypt. In the last two days of the month 57 millimetres of rain were recorded at Tolombat Tabiya, 51 at Mex, 48 at Mariut and 44 at Alexandria; the eastern part of Egypt escaped the heavy rain.

For the month as a whole the barometric pressure was everywhere unusually low, while except on the Mediterranean coast the temperature was slightly below normal. Rainfall was above normal in all districts, being especially heavy in the coastal strip of the north-western Delta; at Alexandria the rainfall was double the normal amount. Duration of sunshine at Giza averaged 8.0 hours per day, which is slightly below normal.

DEPARTURE FROM NORMAL FOR NOVEMBER 1945

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1015.4	—2.0	25.2	+0.7	16.1	—0.4	20.6	+0.2	42	+19
II.—Lower Egypt ...	1015.7	—2.0	25.7	—0.5	13.3	—0.1	19.5	—0.3	16	+6
III.—Middle Egypt ...	1016.0	—1.5	26.2	+0.3	13.2	—0.9	19.7	—0.3	4	+1
IV.—Upper Egypt ...	1015.8	—1.1	27.8	—0.2	13.1	—0.7	20.4	—0.4	1	0
V.—Western Desert...	1017.0	—0.9	27.7	—0.3	10.7	—1.0	19.2	—0.6	0	0
VI.—Red Sea ...	1014.7	—0.9	27.1	0.0	16.6	—0.1	21.8	0.0	0	—3

L. J. SUTTON,

Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose 4 cms. during the month. Its level on December 1st 1945 was 63 centimetres below the normal and 2 centimetres above the corresponding day of last year.

The Bahr El-Jebel at Juba fell slightly during the month. The levels were well below the normal but almost identical with those of last year's throughout.

The River Sobat at Nasser fell few centimetres during the whole month. The levels were above both the normal and those of last year's throughout the whole month.

The White Nile at Malakal was almost steady throughout, and its levels were on the average almost identical with the normal and 18 centimetres above those of last year.

The Blue Nile at Roseires continued its fall till the 2nd then rose till the 8th and fell gradually again at almost normal rate until the end of the month. The levels were in general well above both the normal and those of last year's throughout. At Khartoum the river repeated the same features recorded at Roseires.

The Main Nile at Kajnarti fell almost identical with the normal till the 18th then rose till the 22nd and fell again rapidly thereafter. The levels were on the average 29 cms. above the normal and 1.78 above those of last year's.

The difference of the mean levels in November 1945 from those of November 1944 and from the normal 1906-1935 were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	NOVEMBER 1945 minus 1944	NOVEMBER 1945 minus Normal
	Metre	Metre
Butiaba *	+ 0.02	— 0.63
Juba	— 0.41	— 1.13
Nasser †	+ 0.76	+ 0.40
Malakal	+ 0.18	+ 0.05
Roseires	+ 1.35	+ 1.07
Khartoum	+ 0.98	+ 0.12
Khashm el Girba	—	+ 0.17
Kajnarti	+ 1.78	+ 0.29

* For December 1st, 1945.

† Nasser normal is for 1922-1935 only.

Y. M. SIMAIKA.

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REPORT OF THE WEATHER AND STATE OF THE RIVER FOR DECEMBER 1945

The Weather

Cooler than usual almost throughout. High prevalence of southerly winds. Heavy rain near the beginning and end of the month.

A depression was situated over the eastern Mediterranean at the beginning of the month and the weather was cool and unsettled, with heavy rain in coastal districts, accompanied in places by thunderstorms. At Mex 26 millimetres of rain were recorded; light showers occurred in the northern Delta until the 5th, and lightning was observed in several localities. The weather then became fine and settled, with light southerly winds, but remained cool, the temperature falling to 3° C (37° F) at Tanta and Giza on the morning of the 11th.

On the 12th a depression appeared off Cyrenaica and its advance along the eastern Mediterranean brought mild southerly winds to Egypt. During its passage north of Egypt on the following day strong westerly winds with widespread dust storms prevailed. A week of cool and showery weather ensued, though in general the rain was not very heavy. Subsequently anticyclonic conditions prevailed, with winds mainly at first from the northeast, and light morning mists were common.

The weather became warmer on the 24th with fresh southerly winds, and during the next three days dust storms of moderate intensity were widespread, particularly on the 25th. Much cooler air reached Egypt from the northwest on the 29th, when the wind at Helwan reached a velocity of 70 kilometres an hour in the early afternoon. The temperature near Cairo on that day did not rise above 14° C (57° F) or 6° C below normal. Conditions were very unsettled, with heavy rain in many districts; the highest amounts recorded were 85 millimetres at Tolombat, 27 millimetres at El Arish, 23 at Damietta, 20 at Ismailia, 19 at Mariut and 19 at Tanta. Rain fell as far south as Minya. The weather became much milder on the following day, and the night of December 31st was unusually warm for the time of year.

For the month as a whole the barometric pressure was above normal, and the temperature below, in all districts. Rainfall was slightly below normal everywhere except along the Mediterranean coast east of Damietta, and in the Delta, where it was slightly above. Owing to the unusually high prevalence of southerly winds the air was appreciably drier than usual, the mean relative humidity at Alexandria being 52 per cent compared with a normal value of 65 per cent, while in Cairo it averaged 9 per cent below normal. Duration of sunshine measured at Helwan averaged 8.3 hours per day, or 0.7 above the normal.

DEPARTURE FROM NORMAL FOR DECEMBER 1945

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal	1945	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1018.3	+0.3	19.7	—0.5	10.5	—1.4	15.1	—1.0	36	+ 1
II.—Lower Egypt ...	1019.2	+0.5	20.4	—1.1	7.5	—1.3	14.0	—1.2	21	+ 4
III.—Middle Egypt ...	1019.9	+0.9	20.7	—0.7	8.2	—1.3	14.4	—0.8	1	— 3
IV.—Upper Egypt ...	1020.1	+1.0	21.9	—1.0	7.4	—1.6	14.6	—1.5	1	— 1
V.—Western Desert...	1020.9	+1.0	21.0	—1.1	5.5	—1.1	13.2	—1.5	0	— 1
VI.—Red Sea ...	1018.1	+0.6	22.5	—1.0	1.9	—0.8	17.2	—0.9	0	— 1

L. J. SUTTON,

Director, Meteorological Service.

State of the River

Lake Albert at Butiaba fell 7 centimetres during the month. Its level on January 1, 1946 was 67 centimetres below the normal but 5 centimetres above the corresponding day of last year.

The Bahr el Jebel at Juba rose slightly till the 3rd then fell gradually at almost normal rate till the end of the month. The levels were in general 59 cms. below the normal but 14 cms. above those of last year throughout the whole month.

The River Sobat at Nasser continued its fall at slower than normal rate during the month. The levels were on the whole 1.19 ms. above the normal and 2.34 ms. above those of last year.

The White Nile at Malakal was almost steady during the whole month. The levels were above both the normal and those of last year throughout.

The Blue Nile at Roseires fell at normal rate during the month. The levels were well above both the normal and last year's. At Khartoum the River fell identically with the normal, its levels were on the average 77 cms. above last year's.

The Main Nile at Kajnarti fell almost identically with the normal, its levels were in general 1.13 ms. above those of last year.

The difference of the mean levels in December 1945 from those of December 1944, and from the normal 1906—1935 were :—

STATION	DIFFERENCE OF MEAN LEVELS	
	DECEMBER 1945 minus 1944	DECEMBER 1945 minus Normal
	Metre	Metre
Butiaba *	+ 0.05	— 0.67
Juba	+ 0.14	— 0.59
Nasser †	+ 2.34	+ 1.19
Malakal	+ 0.64	+ 0.25
Roseires	+ 0.81	+ 0.78
Khartoum	+ 0.77	— 0.04
Kajnarti	+ 1.13	+ 0.01

* For January 1st, 1946.

† Nasser normal is for 1922-1935 only.

This year's flood was remarkable in that although it never reached very high levels, it was exceptionally well sustained. Up to the end of August, the Blue Nile at Roseires showed all the characteristics of a poor flood, but thereafter the river rose considerably and high levels prevailed right to the end of September, almost one month later than normal, and the subsequent falling river was well above the average to the end of the year.

Y. M. SIMAIKA.

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